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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,527	07/24/2003	Yoshinori Yoshida	Q76642	8152

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EXAMINER	
DESAI, ANISH P	

ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/625,527	YOSHIDA ET AL.	
	Examiner	Art Unit	
	ANISH DESAI	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-8 and 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-8 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 02/06/09 after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/06/09 has been entered.

2. Support for the amended claims is found in the specification as originally filled.

3. All of the previously made art rejections are maintained.

4. A new 35 USC Section 112-second paragraph rejection is made.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 2, 4-8, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claim 1, this claim recites "a composite film comprised by a composition containing a urethane polymer and an acrylic polymer as effective component". However, it appears from the specification (e.g. see paragraphs 0049, 0052, 0057, and Example 1 of US Patent Application 2004/0126575A1 of this application) that Applicant's composite film in the FINAL product comprises a

crosslinked composition that contains urethane polymer and acrylic polymer. The claim sounds grammatically ambiguous because the scope of the instant invention becomes unclear as to whether the urethane polymer and acrylic polymer could be present as **individual** components in the composite film as set out in the claim. This raises the issue of indefiniteness.

7. Regarding claim 4, this claim recites "the radical polymerizable monomer"; there is insufficient antecedent basis for this limitation in the claim. It is suggested that the aforementioned recitation should be replaced with “an acrylic monomer”.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 2, 4-8, and 10 are rejected under 35 U.S.C. 103(a) as obvious over Barrera (US 5,965,256) in view of Rogers Jr. (US 3,642,567), substantially as set forth in the previous Office action.

9. Regarding claim 1, Barrera discloses a multi-layered film disposed on a substrate. The multi-layered film of Barrera comprises an interpenetrating polymer networks (IPN) layer, preferably acrylate-urethane IPN. The IPN layer of Barrera’s invention is prepared by simultaneous thermal cure of a mixture of acrylate monomer(s)

via free-radical polymerization and urethane precursors, namely polyisocyanate and polyfunctional alcohols, via condensation polymerization (column 8, lines 14-19 and column 12, lines 55-67).

10. Further, Barrera teaches a method of forming the multi-layered film (protective film) wherein the method comprises steps of (a) coating or otherwise depositing a layer comprising IPN film precursors onto a cured adhesive film; (b) coating or otherwise depositing a fluoro-containing topcoat layer onto the curable IPN film precursor, wherein the fluoro-containing topcoat layer is selected from the group consisting of a cured fluoropolymer and energy curable fluoropolymer precursor; and (c) applying at least one heat and light energy to the construction to cure the curable IPN film precursors and the energy-curable fluoropolymer precursor (column 3, lines 60-67 and column 4, lines 1-3). Further the adhesive used in the invention of Barrera is a pressure-sensitive adhesive (PSA) (column 5, line 65).

11. The urethane-acrylate IPN layer of Barrera is equated to a composite film comprised by a composition containing a urethane polymer and a acrylic polymer as effective components as claimed. Additionally, the fluoro-containing topcoat layer is equated to a first film. The structure of the multilayered film of Barrera is fluoro-containing topcoat layer/IPN layer/PSA layer, which reads on the claimed structure of first film/composite film/PSA layer as presently claimed.

12. With regards to claim 1, the difference between the claimed invention and Barrera is that Barrera is silent as to teaching of “wherein the first film is made of at

least one resin selected from the group consisting of polyethylene terephthalate…and polycarbonate resins."

13. However, Rogers discloses a novel composite article such as automobiles, trucks etc. that is protected from the forces of nature and manmade hazards during exposure to outdoor weather. The article of Rogers includes a weather resistant film adhered to the surface of the article using an adhesive (abstract and column 1 lines 5-40). Further, at column 2 lines 40-45, Rogers discloses suitable weather resistant films such as that of Applicant's preferred PVC, polypropylene, polycarbonate, and polyesters such as PET, where polyethylene and ethylene copolymer films are preferred.

14. It is noted that the first film of the primary reference of Barrera is formed of fluoro-containing polymers. Additionally, the protective films of Barrera can be used on vehicle surfaces such as aircraft, boats, trucks, and the like (column 15 lines 20-25). The secondary reference of Rogers is useful in protecting surface of articles such as automobiles from harsh weather using weather-resistant films that are formed of Applicant's preferred first film resins.

15. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the weather-resistant film formed from resins such as that of disclosed by Rogers which reads on Applicant's first film resins, and use it in the invention of Barrera, because selecting a known material based on its suitability for its intended use establishes a *prima facie* case of obviousness.

16. Given that Barrera as modified by Rogers teaches what has been set forth above, it is the position of the Examiner that the properties of the PSA sheet having a

modulus of 9 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the PSA sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm (claim 1), the PSA sheet has a modulus of 15 N/mm^2 or more and 250 N/mm^2 or less when an oblong piece of the PSA sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm (claim 2), the composite film has a storage modulus of at 25°C of less than $2.0*10^8$ Pa and a storage modulus at 100°C of $3.0*10^5$ Pa or more (claim 6), wherein the first film has a storage modulus at 25°C of $2.0*10^8$ Pa or more, would be present in the invention of Barrera as modified by Rogers.

17. The support for the Examiner's position is based on the fact that the PSA sheets of both inventions i.e. that of Applicant and Barrera as modified by Rogers comprise a first film having a material different from the composite film/composite film comprising a urethane polymer and acrylic polymer/PSA layer. Further, the first film of Barrera as modified by Rogers contains resins such as polyethylene. The inventions of Barrera as modified by Rogers and that of Applicant are structurally and compositionally equivalent. Therefore, the presently claimed properties would have been present. The burden is upon the Applicant to prove it otherwise (see *In re Fitzgerald* 205 USPQ 594).

18. As to the newly amended claim requirement of "wherein the pressure-sensitive adhesive sheet is used during a process of processing a semiconductor product", it is respectfully submitted that said recitation is an intended use of the PSA sheet. Since the adhesive tape of Barrera as modified by Rogers as disclosed previously comprises same structure and composition as that of Applicant's PSA sheet

of claim 1, the PSA tape of Barrera as modified by Rogers is capable of being used during a process of processing a semiconductor process.

19. With regards to claim 4, the recitation "composite film comprises a film obtained by reacting a polyol and a polyisocyanate…coating to cure it." is directed to product by process limitation. The products by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

20. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). In the instantly claimed invention the composite film of the Applicant contains a composition which comprises a urethane polymer and an acrylic polymer (vinyl polymer) that is irradiated by radiation. The invention of Barrera is previously noted. As previously noted, the IPN layer of Barrera is formed of acrylate-urethane IPN (column 1, lines 9-10). Additionally, Barrera discloses oven curing of urethane and acrylate polymer mixture to form IPN layer

(column 12, lines 65-67). Therefore, the IPN layer of Barrera is similar to Applicant's claimed composite film.

21. With regards to claims 8 and 10, Barrera discloses the first film having a thickness 0.025 mm (column 20, line 66), which converts to 25 μm (1 mm = 1,000 μm). This disclosure of Barrera meets the claim limitation of the first film has a thickness (t1) of 10 μm or more and 200 μm or less as claimed in claims 8 and 10. Additionally, Barrera discloses the composite film having a thickness of 0.1 mm (column 18, line 45), which converts to 100 μm. This disclosure of Barrera meets the claim limitation of the composite film has a thickness (t2) of 10 μm or more and 300 μm or less as claimed in claims 8 and 10.

Response to Arguments

22. Applicant's arguments received on 02/06/09 have been fully considered but they are not found persuasive.

23. Applicant argues that the claimed PSA sheet is used during processing of a semiconductor product. One the other hand, both Barrera and Rogers are related to protective film based coatings for surfaces exposed to adverse environments, including outdoor weather, solvent, dirt, grease, etc.

24. The Examiner submits that as stated previously, the recitation claim language **"wherein the pressure-sensitive adhesive sheet is used during a process of processing a semiconductor product"** is interpreted as an intended use of the PSA sheet. Since the adhesive tape of Barrera as modified by Rogers as disclosed previously comprises same structure and composition as that of Applicant's PSA sheet

of claim 1, the PSA tape of Barrera as modified by Rogers is capable of being used during a process of processing a semiconductor process. The Examiner sees no factual evidence on the record that would indicate that the PSA sheet of Barrera as modified by Rogers can not be used during a process of processing a semiconductor product. Accordingly, Applicant's arguments are not found persuasive.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./
Examiner, Art Unit 1794

/Hai Vo/
Primary Examiner, Art Unit 1794